

8. 1000
"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

E7.3 10366
CR 131007

20 January 1973

PROGRESS REPORT #2

ON

AUTOMATIC PHOTOINTERPRETATION FOR PLANT SPECIES

AND STRESS IDENTIFICATION (ERTS-A1)

ERTS

Proposal Number MMC 647

Principal Investigator Number PR 202

Contract Number NAS 5-2186

Prepared by: L. Kirvida

Approved by:

George Swanlund
G.D. Swanlund

Honeywell, Inc.
Systems and Research Division
2345 Walnut Street
St. Paul, Minnesota 55113

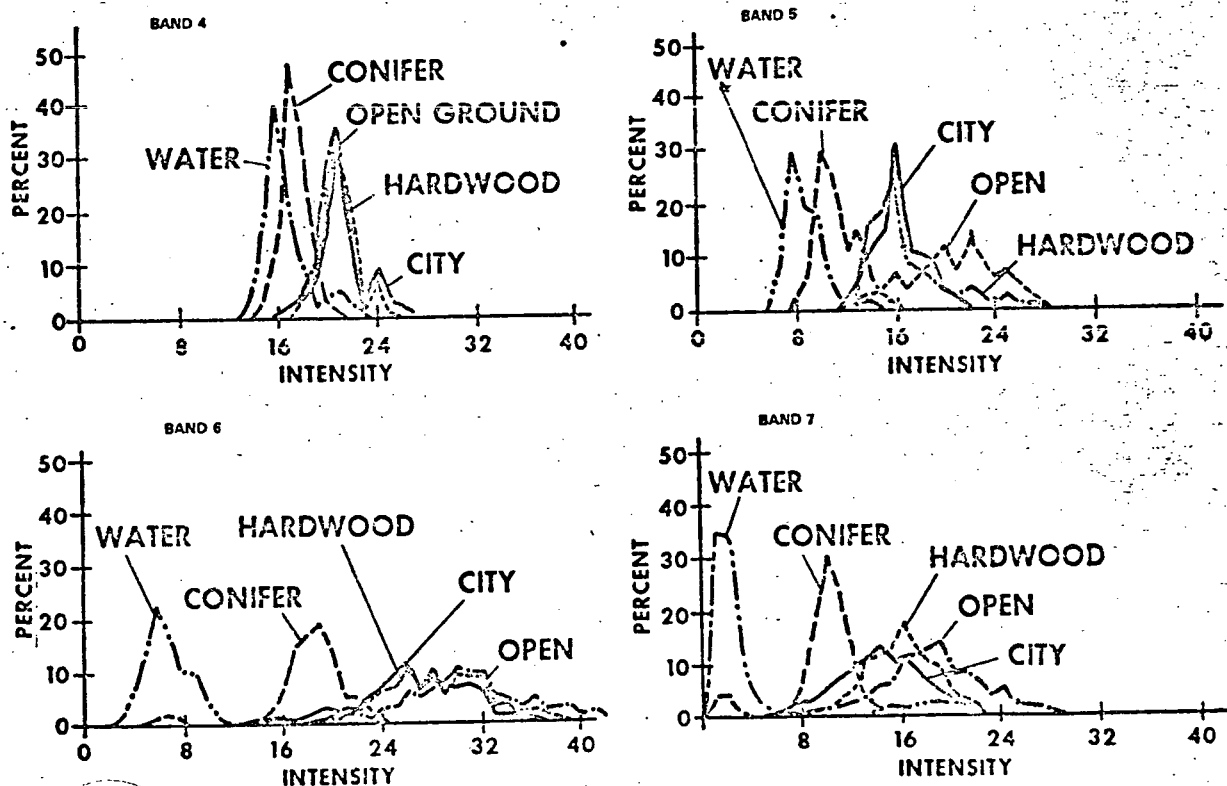
(E73-10366) AUTOMATIC PHOTOINTERPRETATION
FOR PLANT SPECIES AND STRESS
IDENTIFICATION (ERTS-A1) Progress Report
(Honeywell, Inc.) 3 p HC \$3.00 CSCL 08F

N73-19362

Unclas
G3/13 00366

We are in the process of analyzing the data from 1075-16312, an October 7 coverage of the Cloquet area in Northern Minnesota. The area includes the Cloquet Forest Center (a University of Minnesota, School of Forestry test site), so that good ground truth is available. Both density and texture will be used in the analysis.

Histograms showing the density distribution for the five classes in the area have been computed. These were plotted for each of the four MSS bands. The five predominant classes in the area were hardwood, conifer, open, water and city. A great deal of overlap was noted between hardwood, open and city as shown in Figure 1.



Histograms of Intensity Levels
ERTS 1075-16312

During the next two months period, three texture algorithms will be coded, namely the Slant transform, Walsh transform and Fast Fourier transform. Performance will be determined for the Cloquet test site. A paper will be prepared for the March 5-9 Symposium on these results

A cloud free coverage of forested areas in the state of Minnesota was not obtained in 1972. It would be beneficial to include a peak-of-green coverage with the October 7 and January 5 cloud free coverages now available of the Chippewa National Forest. This may be forthcoming in June or July of 1973. Since this contract presently terminates on May 20, 1973, a four month cost free extension would be desirable.